Employment among the disabled

Diane Galarneau and Marian Radulescu

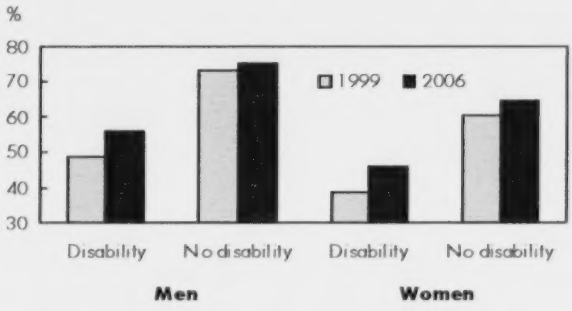
When considering persons with a disability, the assumption often is that they are affected by their disability throughout their life. And yet, among those reporting a disability at some point between 1999 and 2004, only 13% were affected all six years. Thus, a sizeable proportion appear to have a temporary limitation. Disability may also be experienced in phases or episodes, with movement in and out of states of disability of varying severity over time. These phases or episodes likely have major effects on the ability of such persons to participate continuously in the labour market and their ability to meet their needs and those of their family.

Persons with disabilities face different barriers to participation in the labour force, even though maintaining an attachment is often crucial for them. Doing so enables them to meet everyday needs and build self-esteem, and gives a sense of belonging to the community. These days, with an aging population and a possible labour shortage, society can ill afford to forgo any contributions. Furthermore, the *Canadian Charter of Rights and Freedoms* and the *Canadian Human Rights Act* protect and ensure access to the labour market for persons with activity limitations by guaranteeing equality and by prohibiting discrimination based on physical or mental disability (Human Resources and Social Development Canada 2006).

Most surveys that deal with disability provide little information on the dynamics of affected persons' participation in the labour market. The Survey of Labour and Income Dynamics (SLID) fills this gap with its longitudinal component and, since 1999, the question on disability addressing functional and societal limitations, in line with surveys that usually deal with this phenomenon (see *Data source and definitions*).

Diane Galarneau is with the Labour and Household Surveys Analysis Division. She can be reached at 613-951-4626. Marian Radulescu is with the Income Statistics Division. He can be reached at 613-951-0038. They can also be reached at perspectives@statcan.gc.ca.

Chart A Persons with disabilities appear to have benefited from recent employment growth



Note: The employment rate increase from 1999 to 2006 was significant at 0.05 threshold or better for persons with and without a disability.
Source: Statistics Canada, Survey of Labour and Income Dynamics.

This article compares the labour market participation of people with and without a disability using SLID. With its six-year observation period, SLID provides the years people report limitations and how their participation in the labour force is affected as the number increases. It is also possible to examine labour force participation during the years of disability as well as during the years without disability. Because persons with a disability are more likely to have low employment income (Chung 2004), their earnings and social benefits are also examined.

Participating less in the labour market because of disability

In 2006, persons age 20 to 64 with a disability were on average older and less educated, and more likely to have fair or poor health and live alone. Women with a

Data source and definitions

This study is based on longitudinal and cross-sectional data from the **Survey of Labour and Income Dynamics** (SLID). The longitudinal component used the panel covering the years 1999 to 2004, because it was the first panel to include the new question on disability, and it focused on core working-age persons from 20 to 59 in 1999 or from 25 to 64 in 2004. The cross-sectional part focused on persons age 20 to 64 in 2006.

In the Participation and Activity Limitation Survey (PALS)— as in most Statistics Canada surveys on the subject, including the census, the Canadian Community Health Survey (CCHS) and SLID since 1999— the definition of disability uses the bio-psychosocial framework from the World Health Organization (WHO) in which disability is defined in a broad sense and covers all limitations. Disability is "the result of complex interactions between a health problem or functional limitation and the social, political, cultural, economic, and physical environment. These, in combination with personal factors such as age, gender, and level of education, can result in a disadvantage—that is, a disability. Disability is [therefore] not defined merely as being the direct result of a health problem or any physical or mental limitation" (Human Resources and Social Development Canada 2006).

Starting with the 1999 reference year, SLID uses the filter questions on disability from the 2001 and 2006 Censuses to identify people with a disability. These questions ask about any difficulty in hearing, seeing, communicating, walking, climbing stairs, bending, learning or doing similar activities, or a physical condition, mental condition or health problem that reduces the amount or kind of activity that the person can do at home, in leisure activities, at work, or at school. In this article, the disability rate includes all these reasons. Although 'persons with a disability,' 'persons with an activity limitation' and 'handicapped persons' may reflect different realities, the three are used interchangeably in the text.

A major limitation of SLID is the lack of information on the type, duration and severity of a disability. Sizeable differences are observed in the participation rates of persons with one or more disabilities, depending on the type of disability and its severity (Williams 2006 and Statistics Canada 2007) (Table 1).

Thus, for some of the 1.5 million persons with a single year of disability between 1999 and 2004, this might be the result of a minor accident that disabled them for a few weeks, with no lasting consequence other than an unpleasant memory. Alternatively, it might be one episode in a recurring sequence that affects them to varying degrees, depending on the year.

The severity of a disability has more impact on labour market participation than does the type of disability (Hum and Simpson 1996). Despite the lack of information about severity, the number of years of observed disability provides certain indications. As the disability period lengthens, the profile of the affected persons shifts farther from those with no disabilities and their participation in the labour market tends to be lower. Thus, duration seems to *partially* reflect the degree of disability. This is a partial measure of severity since people can have a permanent disability and be only slightly affected in their labour market participation. Disability duration, as measured from its onset, was also explored as a possible proxy for severity. However, this variable has a relatively high number of missing values— approximately one-fifth—in an already relatively small sample and it behaves similarly to the observed duration. The advantage of observed duration is that it permits the inclusion of the entire sample. Health status can also capture the degree of disability. However, when it is added to the regressions, it removes the explanatory power of the disability variables because health status tends to deteriorate with increasing years of disability. Hence, the number of years of observed disability was used.

The episodic nature of disability has attracted increasing attention because of its many possible effects on labour market participation and earnings (Cranswick 1999, and Holland, Whitehead, Clayton and Drever 2008). Capturing this dimension by distinguishing continuous periods of disability during the six-year period from non-continuous periods was therefore also tried. However this distinction is possible only for periods of disability lasting two to five years given that six-year periods are by definition continuous, and one-year periods are non-continuous. Yet, this distinction was incomplete because SLID does not capture entries and exits within any single year. In addition, very little difference was observed in participation rate, hours worked, low-income rate or health status whether the periods were continuous or not. Thus the continuous/non-continuous nature of the disability period was not used.

Table 1 Activity rate by severity and type of disability

	Disability			
	Total	Mild	Moderate	Severe or very severe
	%			
Type of disability	**56.2**	**70.1**	**59.6**	**41.8**
Agility	49.5	63.3	58.8	40.4
Learning	46.0	64.2	55.9	38.8
Other	73.9	74.4	68.2[E]	0.0
Communication	34.9	55.2	47.0	31.4
Developmental disability	30.9	37.9[E]	35.6[E]	28.9
Pain	55.7	71.9	62.0	43.6
Memory	37.6	57.8[E]	64.4	33.1
Mobility	49.3	62.8	57.5	40.6
Hearing	57.5	74.6	71.3	38.8
Emotional or psychological problems	42.9	60.7	58.6	36.8
Vision	47.6	66.5	59.7	39.8

Source: Statistics Canada, Participation and Activity Limitation Survey, 2006.

disability were also slightly more likely than other women to be their household's main income recipient (Table 2).

Persons with a disability also have a weaker attachment to the labour force, since they are, of course, not all able to work. According to the 2006 Participation and Activity Limitation Survey, 42% of persons between 15 and 64 years of age reporting a disability were unable to work. Despite that weaker attachment, they appeared to benefit from the employment growth of recent years (Chart A). From 1999 to 2006, the proportion of men with a disability employed throughout the year grew more (from 48% to 56%) than the proportion of men without a disability (73% to 75%). For women with a disability, the increase (39% to 46%) was slightly more than for women not reporting a disability (61% to 65%).[1]

Men with a disability worked fewer annual hours in 2006 than those who reported no disability (Table 3). The difference was equivalent to 15 weeks of work (in full-time equivalents, and including those who did not work). The smaller number of hours might be attributable to personal characteristics, often associated with a weaker attachment to the labour force, such as more advanced age, lower education level and often having fair or poor health. After controlling for personal characteristics (see *Methodology*), the difference in hours remained substantial—equivalent to 13 weeks full time. For women, the difference was 12 weeks before controls and 11 weeks after. Hence, much of the weaker attachment of these persons to the labour force can be attributed to activity limitation.

Table 2 Characteristics of persons having declared one or several activity limitations

	Men		Women	
	No disability	Disability	No disability	Disability
	'000			
Total	**6,346**	**1,880**	**6,334**	**2,127**
	%			
Age				
20 to 24 years	11	6*	11	5*
25 to 34 years	24	14*	24	12*
35 to 44 years	26	20*	26	21*
45 to 54 years	24	30*	24	31*
55 to 64 years	15	30*	16	30*
Family type				
Single	18	25*	12	20*
Married, no children	21	25*	24	25
Married, with children	49	37*	49	34*
Single parent	2	1	6	8*
Other	10	12*	9	14*
Education				
No high school diploma	12	21*	10	19*
High school diploma	13	14	15	17
Postsecondary education	49	46	49	45
University degree	23	14*	23	14*
Urban region	82	77*	81	81
Rural region	18	23*	19	19
Atlantic provinces	7	9*	8	8
Quebec	26	22*	26	22*
Ontario	37	41*	37	44*
Manitoba	3	4	3	3
Saskatchewan	3	3	3	3
Alberta	11	9	11	8*
British Columbia	13	12	13	12
Recent immigrant	10	7*	12	8*
Not a recent immigrant	90	93*	89	92*
Aboriginal	3	5*	4	6*
Non-Aboriginal	97	95*	96	94*
Visible minority	85	88*	84	87*
Not a visible minority	15	12*	16	13*
Good to excellent health	97	65*	97	60*
Fair or bad health	3	35*	3	40*
Major income recipient	58	57*	32	39*
Not the major income recipient	42	43*	68	61*

* Significant difference for persons with no disability at 0.05 threshold or better
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2006.

Table 3 Annual average hours gap between persons with and without a disability

	Men		Women	
	Gross hours	Adjusted hours[1]	Gross hours	Adjusted hours[1]
No disability	1,808.7	1,284.1	1,206.1	993.3
Disability	1,203.3*	750.2*	733.7*	556.1*
Gap in annual hours	-605.4	-533.9	-472.4	-437.2
Gap in weekly full-time equivalent	-14.8	-13.1	-11.6	-10.7

* Significant difference for persons with no disability at 0.05 threshold or better
1. Adjusted gap calculated using a Tobit model on 2006 annual hours.
Source: Statistics Canada, Survey of Labour and Income Dynamics, 2006.

The prolongation of the disability period accentuates profile differences

Among individuals between 20 and 59 years of age in 1999, 41% reported having a disability at some point between 1999 and 2004. In fact, 15% of the total reported a disability during a single year, whereas only 5% reported a disability in all six years. The remaining 21% reported between two and five years of disability. Even though SLID provides little information as to whether the disability is permanent or temporary or on the degree of disability, an examination of the characteristics of the persons affected by disability brings out clear differences between persons affected for short periods and those affected for longer periods (see *Data source and definitions*).

Persons affected for a single year exhibited slight differences compared with persons reporting no limitation: they were a little older and a little less educated, and their health more often ranged between fair and poor (15% compared with 2% of persons without disabilities) (Table 4).

These differences tended to be exacerbated as the number of years of disability increased. Thus, compared with persons without disabilities, those with a disability all six years were more likely to be female, be between 55 and 64 years of age (40% versus only 15% of persons without a disability), not have a high school diploma (31% versus 11%), not be married or in a common-law union (46% versus 22%), not have children (65% versus 41%), and be in fair or poor health (63% versus 2%). Also, visible minorities were slightly less likely to report a disability. Some differences are seen by region of residence; for example, persons with a disability are more likely to reside in the Atlantic provinces.[2]

Effects felt beyond disability period

The participation rate is useful when looking at disability because of obstacles that disabled persons may encounter. Participation rates include not only employed persons, but also those available for work (Statistics Canada 2007). Persons with one or more disabilities generally have a weaker attachment to the labour force. This is even more so when the disability period is longer. During disability years, the annual average participation rate (see *Methodology*) of affected men age 20 to 59 in 1999 varied between 88% and 44%, depending on whether they reported one or six years of disability. These rates compared with 90% for those with no disability during the six years. For women, rates varied between 73% and 35% depending on the years of disability, compared with 76% for those reporting no disability (Chart B).

The participation rates of persons reporting a disability may also be lower for year with no reported disability. For example, when men had four years of disability, their average participation rate during the other two years was 75%, which is significantly lower than for men without a disability (90%). A similar gap was observed for men reporting five years of disability; their participation rate during their one year without a disability was 73%. Large gaps were also observed for women, starting at three years of disability. For them, the participation rate during years of disability differed very little from that observed during years without a disability—66% and 68% when they reported three years of disability, and 54% and 55% when they reported five. However, these rates were significantly different from those of women who reported no limitation (76%).

Table 4 Personal characteristics by number of diability years[1]

	Years with disability				
	0	1	2 or 3	4 or 5	6
			'000		
Total	**6,107**	**1,529**	**1,322**	**836**	**567**
			%		
Sex					
Men	50	48	48	50	44*
Women	50	52	52	50	56*
Age					
25 to 34 years	22	16*	13*	10*	7*E
35 to 44 years	34	30*	25*	21*	17*
45 to 54 years	28	33*	33*	33	36*
55 to 64 years	15	21*	29*	36*	40*
Health status					
Excellent	35	16*	10*	6*	3*
Very good	43	37*	29*	22*	10*
Good	20	32*	38*	36*	24*
Fair	2	11*	18*	26*	33*
Poor	0	3*	6*	10*	30*
Education					
No high school diploma	11	15*	17*	23*	31*
High school diploma	17	16	19*	18	19
Postsecondary education	47	49	49	44	40*
University degree	25	19*	14*	13*	8*E
Family type					
Single	12	10	14	17*	27*
Married, no children	34	36	40*	44*	39
Married, with children	44	41	32*	22*	15*
Single parent	3	5E	5E	5E	5 E
Other	7	9	9	12*	14*
Children					
None	41	39	49*	55*	65*
1	20	20	22	19	15*
2	27	26	20*	17*	11*
3	9	12*	7	7E	6*E
4 or more	3	3E	2E	2E	F
Atlantic provinces	9	9	7	10	12*
Quebec	27	25	24	24	22
Ontario	35	33	35	34	35
Manitoba and Saskatchewan	7	8	7	7	8
Alberta	10	12*	10	11	13
British Columbia	13	13	18*	13	10E
Urban region	78	77	81	77	78
Rural region	22	23	19	23	22
Visible minority	9	9	8	6*E	4*E
Not a visible minority	91	91	92	94*	96*
Recent immigrant	16	16	16	15	14
Not a recent immigrant	84	84	84	85	87
Aboriginal	2	3E	3E	3E	4*E
Non-Aboriginal	97	96	95	96	95*

* Significant difference for persons with no disability at 0.05 threshold or better
1. Reference year is 2004 for most variables. Health status is an average for years with a disability. For persons without a disability, average health status for the six observation years was used.
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

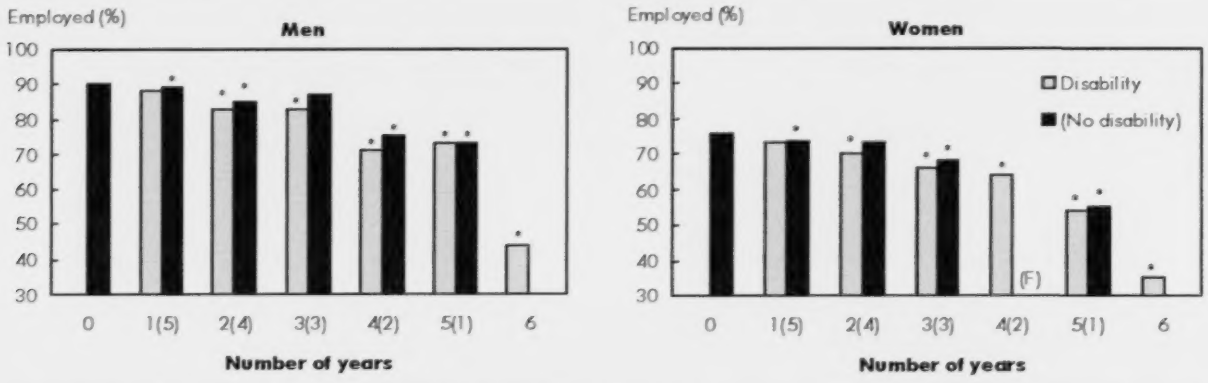
People employed during periods of disability (i.e. those with a positive number of hours—see *Methodology*) often work fewer hours per year. The more years of disability, the wider the gap in relation to the population without disability. Approximately 55% of men and 39% of women without a disability worked the equivalent of a full-time schedule all year, compared with 21% and 14% of those with 6 years of disability (Chart C). This lesser propensity of persons with disabilities to have a full-year, full-time schedule was also generally observed during years with no reported disability.

Gap in hours non-existent for shorter disability periods

Using longitudinal data, it is possible to examine whether the gap in work hours persists regardless of years of disability.

The hours worked during the six years of observation by persons with or without disabilities (including zero hours) were cumulated and adjusted to control for the different characteristics of persons reporting zero to six years of disability (see *Methodology*). Even before adjustments, the difference between persons reporting a disability during only one year and those reporting no disability was not significant. However, the post-adjustment gap remained significant starting at two to three years of disability (Table 5). For persons affected for the six years, the adjusted gap in hours was appreciable, amounting to 1.6 years. The distinction between short and longer periods of disability reveals gaps in hours worked that had been masked in the cross-sectional data.

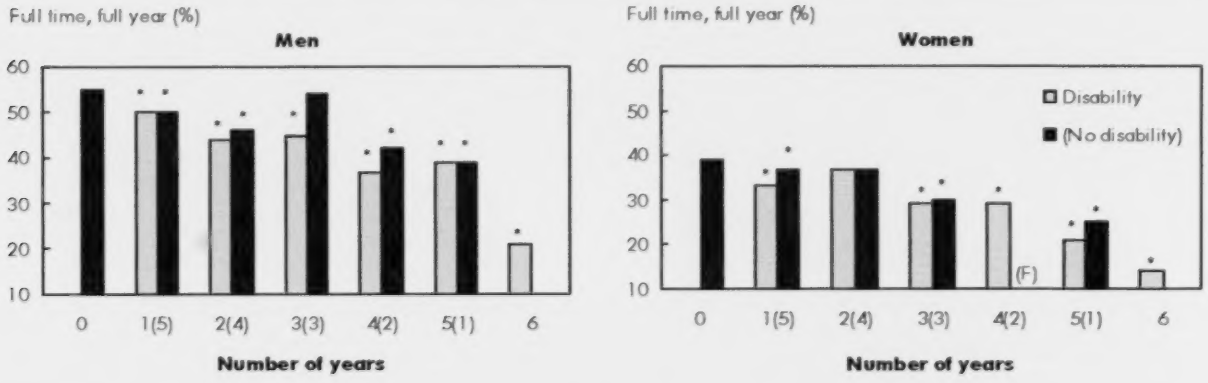
Chart B Activity rate for people reporting a disability is also lower during years without a disability



* Significant difference for 0 disability years at the 0.05 threshold or better
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

These adjusted gaps do not take differences in labour market characteristics into account, since persons with no hours have no employment characteristics. Limiting the analysis to persons having positive hours between 1999 and 2004 provides very similar results. Controlling for employment characteristics reduces this gap to 0.9 years, and the difference remains significant.

Chart C The proportion of people with a disability and working full time, all year is also smaller during years without a disability



* Significant difference for 0 disability years at the 0.05 threshold or better
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

Table 5 Difference in hours accumulated over six years between persons with and those without a disability

	Zero hours included				Zero hours excluded			
	Gross difference		Adjusted difference[1]		Gross difference		Adjusted difference[2]	
	hours	years[3]	hours	years[3]	hours	years[3]	hours	years[3]
Men								
Years of disability								
1	74	0.0	-58	0.0	75	0.0	64	0.0
2 or 3	-992	-0.5*	-865	-0.4*	-993	-0.5*	-482	-0.2*
4 or 5	-1,595	-0.8*	-1,338	-0.7*	-1,598	-0.8*	-869	-0.4*
6	-3,293	-1.7*	-3,168	-1.6*	-3,305	-1.7*	-1,758	-0.9*
Women								
Years of disability								
1	-193	-0.1	-267	-0.1	-192	-0.1	-20	0.0
2 or 3	-679	-0.3*	-855	-0.4*	-689	-0.4*	-377	-0.2*
4 or 5	-1,184	-0.6*	-1,510	-0.8*	-1,190	-0.6*	-868	-0.4*
6	-2,751	-1.4*	-3,233	-1.6*	-2,839	-1.4*	-1,751	-0.9*

* Significant difference for persons with no disability at 0.05 threshold or better
1. Calculated using a Tobit model on hours accumulated over the six-year observation period.
2. Calculated using a linear regression model on cumulative positive hours.
3. Shows equivalent in number of full-time years.
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

Methodology

For people with no activity limitations, **labour force status** is a weighted average over six years. For those with limitations, average activity rates are calculated for years with and without disability. Active indicates that an individual was employed or unemployed throughout the year, inactive indicates being unemployed and not looking for work throughout the year, and other indicates periods of activity and inactivity during the year. The differences were significant at the 5% threshold or better, which was based on Bootstrap weights. A similar approach was used to estimate the **proportion working full time throughout the year**. A person working full time throughout the year must have worked the equivalent of an average of 1750 to 2199 hours per year.

The estimates of adjusted hours of work come from a Tobit regression model, which is well suited to data sets containing a number of non-participants in a given activity, as is the case here because of persons who did not work a single hour during the observation period. The technique simultaneously takes the probability of working and the duration of the work time into consideration. The model begins by evaluating the probability of working using a binary variable, taking the value 1 if the number of hours is positive and 0 otherwise; it then evaluates, in linear fashion, the effect of the different independent variables on hours worked. Separate models were estimated for men and women. The independent variables were: having or not having a limitation, age, education, family type, province, region (urban or rural), being the major income recipient of the economic family, visible minority status, belonging to an Aboriginal group, and recent immigrant status. In the longitudinal part, the years of observed disability were also taken into consideration, which partly catches the degree of disability. Each model had four binary variables indicating the length of observed disability (one, two or three, four or five, or six years) in addition to demographic characteristics.

The regressions on the earnings gap were estimated with an ordinary least squares model. Separate models were used for men and women. The dependent variable was the logarithm of 2004 hourly earnings, and the demographic variables were the same as in the hourly model. A second model included—in addition to demographic variables—labour market characteristics such as workplace size, industry, occupational skill level, seniority and unionization. Other models distinguished between disabilities that limited individuals at work or school from other disabilities. However, years of disability and type of disability could not be used simultaneously because of their high correlation. Only people with positive earnings were used for the estimates.

The regressions estimating the probability of low income covered all individuals with and without hours of work and took only demographic variables into consideration. The dependent variable was a binary variable with the value 1 if the person's household income after taxes was below the low income cut-off as defined in SLID, and 0 otherwise.

The analysis was conducted using Stata 10, which lends itself to the use of Bootstrap weights.

Table 6 Work-interuption rate[1] by years of disability and sex

	Years with disability						
	0	1	2	3	4	5	6
Men				'000			
Number of jobs	3,445	815	431	250	203	175	125
				%			
Interrruptions	17	19	20	16	20	19	20
Women				'000			
Number of jobs	3,052	792	362	255	182	142	152
				%			
Interrruptions	18	21*	19	24*	20	22	24

* Significant difference for persons with no disability at 0.05 threshold or better
1. Termination rate for all of one person's jobs.
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

causing decreased performance, can result in reduced pay and fewer promotions (Harrison and Martocchio 1998, and Yelin and Trupin 2003).

Both for persons with limitations and those without, the reasons most often cited were job-related, that is, a layoff, the end of a contract or seasonal job, a dismissal, a strike or a company relocation. These job-related reasons accounted for between 43% and 53% of the reasons cited for work interruptions by men and between 35% and 40% of the reasons cited by women.

Comparable work-interruption rates

Among those in the labour force, both men and women affected by a disability were no more likely than those not affected to experience work interruptions between 1999 and 2004 (Table 6).[3] However disabled persons were more likely to opt for reduced hours or non-participation.

Generally, regardless of having a disability, the reasons given for work interruptions were comparable. Only interruptions for health reasons were slightly more frequent for persons with a disability. Health reasons were cited for work interruption of respectively 6% and 8% of these men and women (no control for years of disability), compared with 0% and 1% for those without disabilities. A recent study (Marshall 2006) showed that persons with a disability were up to 2.4 times more likely to take extended sick leave, and hence were more likely to experience lower pay. Other research has also shown that absenteeism, in addition to

Table 7 2004 earnings differential between persons with a disability and those without a disability, by disability years

	Average hourly earnings	Difference	Adjusted difference	
		Gross	Model 1	Model 2
	$		%	
Men				
Disability years				
0	25.08	...	...	...
1	24.19	-4	-4	-1
2 or 3	21.72	-13*	-10*	-6*
4 or 5	21.49	-14*	-8*	-5*
6	19.97	-20*	-19*	-11*
Activity limitations				
None	25.08	...	...	...
At work or at school	21.04	-16*	-12*	-7*
Elsewhere	24.75	-1	-1	0
Women				
Disability years				
0	19.21	...	...	...
1	18.94	-1	-1	0
2 or 3	17.77	-7*	-7*	-4
4 or 5	17.04	-11*	-11*	-8*
6	14.80	-23*	-17*	-10*
Activity limitations				
None	19.21	...	...	...
At work or at school	16.99	-12*	-10*	-6*
Elsewhere	19.47	1	-2	-1

* Significant difference for 0 disability years at 0.05 threshold or better
Note: See *Methodology* for a model description.
Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

A significant earnings gap for long periods of disability

Persons affected by disability generally see their average hourly earnings lag behind those not affected, and the gap increases with the number of years of disability.[4] In 2004, this gap ranged from nearly zero for those with one year of disability to 20% and 23% for men and women respectively who reported six years of disability (Table 7).

Since persons with disabilities may have characteristics that might explain their lower earnings, earnings were adjusted to neutralize the effect of these characteristics. When differences in demographic characteristics were taken into account, the earnings gap declined (model 1) but remained significant, ranging between 1% and 19%, depending on the number of years of disability. The addition of labour market characteristics (model 2) reduced the gap, but it remained significant for men starting at two to three years of disability, and for women starting at four to five years.

SLID does not give any indication of the type of disability, but it is possible to distinguish between disabilities that limit people at work or school and those that limit them in other activities. When men are limited at work, their earnings fall by 16%. After adjustments for demographic characteristics, the drop remained significant at 12%. Among women, the drop was 12% before and 10% after adjustments. The inclusion of labour market characteristics reduced the drops to 7% and 6% respectively. People with disabilities that limited them other than at work did not have an earnings gap even before adjustments compared with people who were not limited. Being limited at work was a more pronounced disadvantage.

In general, few differences were seen between the disabled and the non-disabled in terms of union membership and pension or health insurance coverage. However, among women disabled for all six years, some differences appeared for disability and dental coverage (Table 8).[5]

Persons with a disability more at risk of low income

A person may have low earnings but live in a household that is not low-income because of the earnings and incomes of other household members. Low-income rates were examined for all persons, regardless of their labour force status. Labour force participation has a major effect on the likelihood of low income (Kapsalis and Tourigny 2007). Persons with a disability therefore have an additional risk factor, since their disability reduces their propensity to participate in the labour force.

Table 8 Characteristics of main job for the employed in 2004 by disability years

	Years with disability									
	Men					Women				
	0	1	2 or 3	4 or 5	6	0	1	2 or 3	4 or 5	6
	'000									
Employed	**2,466**	**546**	**450**	**240**	**76**	**2,269**	**569**	**454**	**227**	**99**
Benefits	%									
Union or collective agreement	35	39	39	40	49*	33	41*	34	37	25[E]
Employer life insurance or disability plan	72	65*	67	67	70	61	62	54*	54	40*[E]
Employer health insurance plan	76	70*	73	70	76	64	70*	62	57	52
Employer dental plan	71	68	67	67	66	58	62	54	57	43*
Pension plan	55	55	53	50	49	49	46	45	45	40[E]

* Significant difference for 0 disability years at 0.05 threshold or better

Note: Data are from the longitudinal panel from 1999 to 2004. Considering the minor annual variation during this period, the selected variables correspond to the last year, 2004.

Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

Even after taking differences in demographic characteristics into consideration, persons with disabilities were generally at greater risk of having low income, and this probability generally increased with the number of years of disability. Men disabled for two to five years had twice as high a risk, and those disabled for six years had eight times the risk of men without a disability (Chart D). Women disabled for six years were at four times a higher risk than non-disabled women. Women who had been disabled for less than six years showed slight differences from the non-disabled. Among those limited at work or at school, men were almost at four times a higher risk of low income, and the risk for women was twice as high. People with limitations in activities other than at work did not show significant gaps compared with those without limitations. According to a recent study, people who were limited at work were not only at greater risk of having low income, but also of *persistent* low income, and their lower attachment to the labour market had the strongest impact on their persistent low income (Kapsalis and Tourigny 2007).

Conclusion

The use of longitudinal data on disability sheds new light on the entire subject of activity limitations. A first finding is that a disability can be temporary or episodic, meaning that people are not necessarily affected by disability continuously. From 1999 to 2004, only 13% of people who indicated a disability reported being affected by it during all six years.

The longer the disability period, the more likely the persons affected are to have less education, to be women, to be older and to live alone. These characteristics are often associated with lower participation in the labour force. Persons with a disability indeed work fewer hours per year. This gap persists even after demographic characteristics are taken into consideration. Over a six-year period, the difference in the number of work hours between persons with and those without a disability can amount to 1.6 years of 'lost' work time. Following controls for labour market characteristics, the gap is still significant and amounts to almost one year.

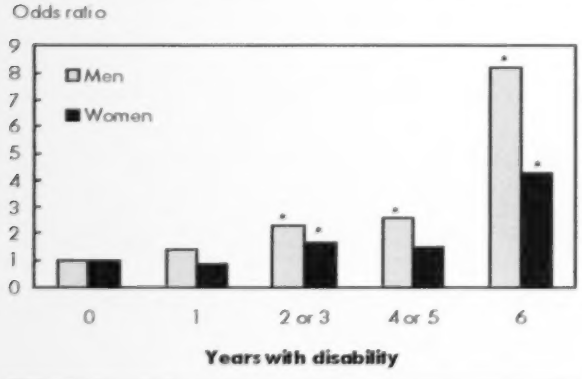
For many persons with disabilities, the effects of disability extend beyond the period of the disability. The participation rate and the annual work hours of persons with disabilities are lower not only during the years of disability, but also during other years.

For both men and women, work-interruption rates are similar to those for their counterparts without disabilities. However, persons with disabilities are more likely to stop working because of health problems. Job-related reasons (layoff, end of a temporary job, end of a contract, etc.) accounted for most work interruptions, for both persons with and those without limitations.

The review of working conditions shows significant differences between people with and without a disability. These differences are very sensitive to the years of disability, and persist even after taking differences in demographic characteristics into consideration. Thus, when compared with people without disabilities, men and women disabled for six years report earnings differences of up to almost 20%. In general, few differences are seen in terms of social benefits.

Labour market activity has a significant impact on the probability of low income. Given that people with disabilities have a lower propensity for being active in the labour market, their risk of being in low income is higher. This low-income risk is relatively higher among men: those disabled for four to five years have twice the risk, and those disabled for six years are eight times at greater risk than men without disabilities. Among women, the risk is four times greater when they have been disabled for six years, but there is little difference

Chart D Men with a disability are at a relatively higher risk of low income



* Significant difference for 0 disability years at 0.05 threshold or better

Source: Statistics Canada, Survey of Labour and Income Dynamics, 1999 to 2004.

in terms of the risk of low income for women with and those without disabilities for periods of less than six years.

Longitudinal data reveal gaps in terms of working hours, earnings and low income between people with and without disabilities that are masked in cross-sectional data. They also underline the importance of measuring the severity of the disability better in order to fully understand its impact.

Notes

1. Similar results were reported in Uriarte-Landa and Spector 2008.
2. These differences are significant at the threshold of 5% or better. Disability rates were also higher in PALS for some Atlantic provinces (Statistics Canada 2008).
3. Refers to all jobs held per year. The rate is calculated on the basis of the total number of jobs held each year between 1999 and 2004.
4. The gap in average hourly earnings is calculated for persons with earnings during the 2004 reference year.
5. Some studies have tried to determine to what extent the availability of a disability pension can increase the probability of disability claims among workers. The results are generally non con.

References

Chung, Lucy. 2004. "Low-paid workers: How many live in low-income families?" *Perspectives on Labour and Income.* October. Vol. 5, no. 10. Statistics Canada Catalogue no. 75-001-XIE. p. 5-14. http://www.statcan.gc.ca/pub/75-001-x/11004/7364-eng.pdf (accessed April 22, 2009).

Cranswick, Kelly. 1999. "At work despite a chronic health problem." *Canadian Social Trends.* No. 52. Spring. Statistics Canada Catalogue no. 11-008-XIE. p. 11-15. http://www.statcan.gc.ca/pub/11-008-x/1998004/article/4419-eng.pdf (accessed April 22, 2009).

Harkness, Jon. 1993. "Labour force participation by disabled males in Canada." *Canadian Journal of Economics.* Vol. 26, no. 4. November. p. 878-889. http://www.jstor.org/stable/pdfplus/135826.pdf (accessed April 22, 2009).

Harrison, Davie and Joseph Martocchio. 1998. "Time for absenteeism: A 20-year review of origins, offshoots, and outcomes." *Journal of Management.* Vol. 24, no. 3. p. 305-350.

Holland, Paula, Margaret Whitehead, Stephen Clayton and Frances Drever. 2008. *Gender and Social Inequalities in the Employment of Chronically Ill or Disabled People: evidence from the UK.* University of Liverpool, UK. Presentation given at the Socio-economic Conference 2008. May. Statistics Canada. Ottawa.

Human Resources and Social Development Canada. 2006. *Advancing the Inclusion of People with Disabilities (2006).* 110 p. http://www.hrsdc.gc.ca/eng/disability_issues/reports/fdr/2006/advancinginclusion.pdf (accessed April 22, 2009).

Hum, Derek and Wayne Simpson. 1996. "Canadians with disabilities and the labour market." *Canadian Public Policy.* Vol. 22, no. 3. September. 15 p. http://economics.ca/cgi/jab?journal=cpp&view=v22n3/CPPv22n3p287.pdf (accessed April 22, 2009).

Kapsalis, Constantine and Pierre Tourigny. 2007. *Profiles and Transitions of Groups most at Risk of Social Exclusion.* Report prepared for Social Development Canada by Data Probe Economic Consulting Inc. Ottawa. 113 p.

Marshall, Katherine. 2006. "On sick leave." *Perspectives on Labour and Income.* Vol. 7, no. 4. April. Statistics Canada Catalogue no. 75-001-XIE. p. 14-22. http://www.statcan.gc.ca/pub/75-001-x/10406/9185-eng.pdf (accessed April 22, 2009).

Statistics Canada. 2008. *Participation and Activity Limitation Survey, 2006: Labour Force Experience of People with Disabilities in Canada.* Analytical Paper. Statistics Canada Catalogue no. 89-628-X. 22 p. http://www.statcan.gc.ca/pub/89-628-x/89-628-x2008007-eng.pdf (accessed April 22, 2009).

Statistics Canada. 2007. *Participation and Activity Limitation Survey, 2006: Analytical Report.* Statistics Canada Catalogue no. 89-628-XIE – No. 002. 38 p. http://www.statcan.gc.ca/pub/89-628-x/89-628-x2007002-eng.pdf (accessed April 22, 2009).

Uriarte-Landa, Jorge and Aron Spector. 2008. *Labour Market Trends of People with Disabilities in Canada (1999-2005).* Socio-economic Conference 2008. Statistics Canada. Ottawa.

Williams, Cara. 2006. "Disability in the workplace." *Perspectives on Labour and Income.* Vol. 7, no. 2. February. Statistics Canada Catalogue no. 75-001-XIE. p. 16-24. http://www.statcan.gc.ca/pub/75-001-x/10206/9096-eng.pdf (accessed April 22, 2009).

Yelin, Edward H. and Laura Trupin. 2003. "Disability and the characteristics of employment." *Monthly Labor Review.* Vol. 126, no. 5. May. p. 20-31. http://www.bls.gov/opub/mlr/2003/05/art3full.pdf (accessed April 22, 2009).